REMARKS/ARGUMENTS

Claims

Claims 1 through 62 were in this application and addressed by the Examiner in the present December 31, 2003 response. Claims 46 through 53 are allowed. The present Amendment amends claims 13, 21, 28, 46, 54, and 55. The rejection and amendments to the claims are addressed below.

The Examiner objects to claims 54 and 55. Minor corrections are made to those claims in response to the Examiner's objection, with a comparable change to claim 46. The Examiner also indicates that certain claims are allowable and certain objected to claims may be re-written so are to overcome the objection so as to make them allowable. The Examiner is thanked for the thorough review of the pending claims.

Rejections Under 35 U.S.C. §§ 102

Claims 1 through 5, 12, 35 through 39 and 45 are rejected under 35 U.S.C. § 102(e) as being anticipated by Tiedemann (5,926,470; hereafter "Tiedemann'470").

With respect to claim 1, the Examiner states, among other things, that Tiedemann '470 shows the step of "transmitting from the base station, derived versions of a midamble signal to each antenna within the plurality of antennas (antennas 334, 336, see figure 13)" and "providing a distinct delay associated with each derived version of the midamble signal and its respective antenna (see col. 28, lines 46-65)." However, Applicants respectfully submit that nowhere in Tiedemann '470 is there any discussion or demonstration that relates to a midamble and, as such, neither of the two clauses cited immediately above are shown by that reference. In this sense, therefore, the text in Tiedemann '470 cited by the Examiner does not appear to show any more than what Applicants discuss in the Specification under the Description of the Prior Art, namely, that delay diversity has been shown in a CDMA system. However, as also pointed out therein, and also with beneficial criticality such as is stated by way of example at page 12, line 15 through page 13, line 3, the preferred embodiments, as recited in many claims including claim 1 and others noted later, are directed to a method or system that includes midambles and the treatment thereof. In contrast, Tiedemann '470 is not described as directed to midambles or a system that includes them.

In view of the preceding, Applicants respectfully submit that claim 1 is in condition for allowance and, thus, so are its dependent claims 2 through 12.

Similar to the preceding, independent claim 35 is a system that includes midambles and the treatment thereof. In contrast, Tiedemann '470 is not described as directed to midambles or a system that includes them. Thus, Applicants respectfully

submit that claim 35 is in condition for allowance and, thus, so are its dependent claims 36 through 45.

Claims 13, 15 through 19, 21 through 26, 28 through 33, and 54 through 59 are rejected under 35 U.S.C. § 102(e) as being anticipated by Uesugi (6,314,304; hereafter "Uesugi '304").

Claim 13 as amended recites:

A method for communicating data between a base station having a plurality of antennas and at least one mobile terminal, the method comprising the steps of:

receiving at the base station, a time division duplex mode uplink signal from each mobile terminal in communication with the base station and estimating a path profile associated with each received uplink signal;

transmitting from the base station, a time division duplex signal to each antenna within the plurality of antennas; and

providing from the base station a distinct delay associated with each transmitted time division duplex signal and its respective antenna..

From the preceding, note that all steps of claim 13 are directed to the recited base station, as arguably was the case prior to this amendment as well. In any event and in contrast, the Examiner cites to Uesugi '304 col. 11, lines 3-61 in finding claim 13 anticipated. That text is directed to the "mobile station" of Figure 14 (see, e.g., col. 11, line 3) and not a base station as in claim 13. Additionally, the Examiner does not identify a specific reference in Uesugi '304 as corresponding to the claim 13 recitation of a "distinct delay," but with respect to later claim 21 the Examiner identifies delay devices 909 in figure 11 in connection with the delay means of that claim. Presumably, therefore, the Examiner is contending with respect to claim 13 that the "delay circuits 1207," in the column 11 cited by the Examiner, correspond to the "distinct delay" of claim 13. However, Applicants respectfully submit that the "delay circuits 1207" are for a mobile station processing a received signal, not a base station providing a transmitted signal. Moreover, the function of the "delay circuits 1207" are, in combination with other aspects, "to remove the intersymbol interference ***caused by*** the difference in distance between antennas of the base station and/or a delayed wave produced by diffraction or reflection of a radio signal on buildings or mountains." (col. 11, lines 20-23; emphasis added). Thus, these delay elements are not directed to a "***distinct***" delay that is imparted into the signal by the base station, as recited in claim 13, but instead are only directed to a mobile station that processes aspects that arise from inherent interference rather than from aspects of a distinct delay that is intentionally introduced into the transmitted signal. Indeed, the manner of "providing" this "distinct delay," as recited in claim 13, is also detailed in the specification, and may be seen by way of example in Figure 4a, with different delays 414 through 430. No such teaching is shown in Uesugi '304.

In view of the above, Applicants respectfully submit that claim 13 is in condition for allowance and, thus, so are its dependent claims 14 through 20.

Similar to the preceding directed to claim 13, independent claim 21 is a system that includes "delay means operatively coupled to the plurality of spaced apart antennas and the signal distribution means ***for providing a distinct delay*** in each of the time division duplex communication signals coupled between the base station and the plurality of spaced apart antennas." The description of Uesugi '304 is not directed to a base station or these recited aspects. Thus, Applicants respectfully submit that claim 21 is in condition for allowance and, thus, so are its dependent claims 22 through 27.

Also similar to the preceding directed to claims 13 and 21, independent claim 28 is a system that includes "means ***for providing a distinct delay*** associated with each antenna of the plurality of spaced apart antennas such that a time division duplex communication signal coupled between the base station and the plurality of spaced apart antennas can be demodulated within the at least one mobile terminal." The description of Uesugi '304 is not directed to a base station or these recited aspects. Thus, Applicants respectfully submit that claim 28 is in condition for allowance and, thus, so are its dependent claims 29 through 34.

Also similar to the preceding directed to claims 13, 21, and 28, independent claim 54 is a "base station" system that includes "***variable delay means*** operatively coupled to the plurality of spaced apart antennas and the signal distribution means ***for providing derived delays*** associated with the TDD communication signals and the plurality of spaced apart antennas." The description of Uesugi '304 is not directed to a base station or these recited aspects. Thus, Applicants respectfully submit that claim 54 is in condition for allowance and, thus, so are its dependent claims 55 through 62.

Rejections Under 35 U.S.C. §§ 103

The Examiner also rejects various claims under 35 U.S.C. § 103 in view of both the above-discussed references, namely, Tiedemann'470 and Uesugi '304. However, such a combination does not overcome the failure of teachings of those individual patents as described above. Accordingly, Applicants respectfully submit that such rejections should be withrdrawn.

Fees

A Petition for an Extension Of Time for two (2) months is submitted herewith. A Fee Sheet is submitted herewith, authorizing payment for the Petition. The Examiner is hereby authorized to charge any additional fees necessary to effect the present filing to Deposit Account 20-0668 of Texas Instruments Incorporated.

Conclusion

Reconsideration and favorable action are respectfully requested and, toward that end, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION
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The undersigned hereby certifies that this correspondence is being transmitted via facsimile on June 1, 2004, to the fax number of (703) 872-9306 of the following addressee:

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